

# Dark matter search in the COSINE-100 experiment

*Monday, 14 June 2021 13:30 (30 minutes)*

Although there is evidence for the existence of dark matter in astrophysical observations, no direct detection has been reported except for claims of the DAMA/LIBRA collaboration. COSINE-100 experiment has been operating since September 2016 aiming to reproduce the DAMA/LIBRA annual modulation signal. The target material is NaI(Tl) crystal, as in the DAMA/LIBRA experiment. Data is being taken at the 700-m-deep Yangyang underground laboratory, Korea. In addition to the analysis of the annual modulation signal, interpretations based on various models have also been performed. With the recent successful lowering of the energy threshold from 2 keV to 1 keV, a new analysis is ongoing and near completion. In this presentation, we present an introduction of the experiment and the latest analysis results, as well as show the plans for the next phase, after validation of the DAMA/LIBRA's result.

**Presenter:** KO, Young Ju (IBS CUP)

**Session Classification:** Special Session